

ON THE EREMIAN REPRESENTATIVE OF *MYRMECOBIUS FASCIATUS*  
(WATERHOUSE).

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The status of *Myrmecobius fasciatus* beyond the south-western districts of Western Australia, which until now have been considered to be its chief stronghold, has long been a matter of uncertainty.

Its presence in the centre was first established by the work of the Elder Expedition,<sup>(1)</sup> but that it formerly extended very much further south, almost, in fact, to the coastal districts of the State of South Australia, is attested by the statements of Sir George Grey and the early settlers here, and confirmed by the presence of specimens from the southern part of this State, in the British and South Australian Museums. No definite records of the animal from the south-eastern portions of its range have been obtained for many years, and since most of this area is more or less closely settled, it is also unlikely (as Wood-Jones has opined) that it still survives here.

Recent field work, by the writer, in the far north-west of this State (in a typical eremian environment) has shown, however, that *Myrmecobius* still has a wide distribution in the south-west parts of the centre beyond the limits of pastoral settlement, and in some localities is by no means uncommon. It is possible that these colonies actually link up with the far south-western ones in Western Australia in a continuous band of distribution,<sup>(2)</sup> and enquiry into these and related matters is proceeding and will be dealt with later in a general account of the Luritja mammals.

But for the present, as an excellent series of the central animal is now available, comparisons have at once been made with a series from south-west Western Australia, and these show that the former, while structurally identical with the typical race, constitutes a distinct colour variety, which I propose to separate under the name

*MYRMECOBIUS FASCIATUS* var. *RUFUS*.

Size, apparently averaging slightly less than in the typical race, with which, however, it agrees closely in all essential structural features, both external and cranial. As the subspecies is founded entirely on pelage characters, it may be sufficiently defined by listing the points in which it differs from the better-known animal.

(1) The whole of the dorsum is more strongly suffused with rufous. This is particularly noticeable on the crown of the head and the fore-part of the back, where the colouration is constantly a rich uniform brick red (about Ridgway's

<sup>(1)</sup> Trans. Roy. Soc. S. Aust., vol. xvi. (1892-1896), p. 154.

<sup>(2)</sup> This is implied by le Souef (Wild Animals of Australia), who gives the range of the animal as extending from "Port August to about the latitude of Perth." But as no detailed records of the species in the intermediate tracts seem to have been published, and as much of the country is quite untouched so far as systematic collecting goes, I presume that Mr. le Souef, in this statement, is estimating the probabilities of the case, rather than stating an ascertained fact.

orange rufous to Sanford brown) sparsely pencilled with pure white, but without black hairs and presenting a very different appearance to the same areas in the typical variety, where (even in the most richly-coloured specimens) these parts are grizzled with white, red, and black.

(2) The transverse light bands of the posterior back may be either pure white or cream and, as regard number, breadth and spacing, they show about the same range of variation as in *typicus*, but in adults there is a constant difference in the colour of the areas which they enclose. In the western form these areas culminate in broad rump bands which are either dark grey or jet black, but in variety *rufus* they are constantly a rich brown (about Ridgway's Mars brown to bay). This colour is subject to marked change on long preservation in alcohol, and in the longest kept examples (taken in 1903) the brown has faded to a ferruginous red, scarcely differentiated from the colour of the foreback. Such examples show the white bands traversing an almost uniform red field, and are strikingly different from fresh examples of either race.

(3) In *rufus*, even in midwinter, the coat shows a much scantier underfur and, as a result, seems more adpressed and somewhat coarser.

(4) The outer surface of the ear is clothed with bright rufous hairs, from base to tip, whereas in *typicus* the ear at the base has a fine grizzle of yellow and black, grading out to pure black at the tip. A good distinction at all stages.

(5) The ventral surface is more variable than the dorsum, but is always some shade of ochraceous tawny and never white as it frequently is in the typical form.<sup>(3)</sup>

The colour is richer in young animals than in old.

(6) Colouration in the var. *rufus* is much more constant than in *typicus*. All the examples obtained were almost exactly alike dorsally, whereas in the south-west, even in much more restricted localities, scarcely two examples of *typicus* can be got which are closely matched.

Sexual differences in colour and size are negligible.

*Skull and dentition* as is the typical form.

*Dimensions*.—Range in apparently adult specimens of both sexes; head and body, 200-270; tail, 130-170; pes, 44-47; ear, 25-29.

*Skull Dimensions* of the co-type M. 3061, ♀; basal length, 53·8; greatest breadth, 29·9; nasals length, 22·8; nasals greatest breadth, 12·5; nasals least breadth, 3·2; intertemporal breadth, 18·0; interorbital breadth, 14·8; palate length, 41·5; palate breadth outside M<sup>4</sup>, 11·6; anterior palatal foramen, 3·0; height of canine, 2·7; length of M<sup>3</sup> (worn), 1·7.

*Co-types* of Subspecies.—Adult ♀, South Australian Museum; registered number, M. 3061 (skin and skull); and adult ♀, South Australian Museum; registered number, M. 3759 (alcohol).

*Type Locality*.—Mulga sand dunes, south and south-west of the Everard Range, far north-west of State of South Australia.

*Range*.—At present apparently not north of about 25° S. lat., nor east of 132° 30' E. long. To the south and west as yet undetermined. Formerly as far south as Adelaide, and probably ranging east into the Victorian and New South Wales mallee areas.

Seventeen individuals examined.

<sup>(3)</sup> This was attributed by Thomas to fading, but is not necessarily so.

Although it is very likely that it intergrades with the typical variety in the western portions of its range, this beautiful animal, the most brilliantly coloured of all the marsupials, is so distinct in the type locality that it undoubtedly merits recognition as a subspecies. Knowledge that the eastern forms of *Myrmecobius* are redder than the western, seems to be due primarily to Major Thomas Mitchell, upon whose meagre accounts Waterhouse<sup>(4)</sup> founded the *nomen nudum*, *Myrmecobius rufus*.

The name was ignored by Thomas in the catalogue of 1888, although a South Australian specimen was included in the British Museum collection at that time, but was reintroduced by Wood-Jones, who in 1923 published a preliminary description with figures of the skull, of South Australian specimens, from the Murray and from near Adelaide.

In estimating the relation of the central animal to the south-eastern one described by Professor Wood-Jones, I have had to rely for external characters on a single mounted specimen taken in the Murray Scrubs in 1863, and for cranial characters, on two very immature skulls. This material, though insufficient for a proper comparison, seems to me to indicate strongly that in this State the South-eastern and north-western animals are one and the same, and that this form is not specifically separable from that of the karri, jarra and wandoo belts of Western Australia.

The three districts from which specimens have now been examined are widely sundered and show considerable differences in climate and vegetation, but *Myrmecobius*, like its Ornithodelphian analogue *Echidna*, is apparently too strongly committed to a specialized diet, which it finds almost unaltered over the whole of its range, to make any structural response to such changes in physical conditions.

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(4) Jardine's Naturalists' Library, vol. xxiv. (1855), p. 149.